

Amendment and Response

Applicant: Craig D. Sunada et al.
Serial No.: 10/016,746
Filed: October 30, 2001
Docket No.: 10991022-8

Title: INNER PAPER GUIDE FOR MEDIA SHAPE CONTROL IN A PRINTER

IN THE CLAIMS

Please amend claim 27 as follows:

14.-26. (Cancelled)

27. (Currently Amended) A media handling system for handling sheets of media, the media handling system comprising:

a pick roller structure configured to selectively contact and pick a media sheet from an input source, including a plurality of spaced pick roller wheels;

a drive roller structure spaced from the pick roller structure;

a first guide structure longitudinally extending continuously from the pick roller structure to the drive roller structure;

a second guide structure extending between the pick roller wheels and longitudinally extending continuously between the pick roller structure and the drive roller structure to define a media path between the first and second guide structures, the media path defining a media entrance adjacent the pick roller structure and a media exit adjacent the drive roller structure; and

wherein the media path constrains the movement of a trailing edge of the media sheet as the trailing edge leaves the pick roller structure to minimize trailing edge print defects.

28. (Previously Presented) A media handling system for handling sheets of media, the media handling system comprising:

a pick roller structure configured to selectively contact and pick a media sheet from an input source;

a drive roller structure spaced from the pick roller structure;

a first guide structure longitudinally extending continuously from the pick roller structure to the drive roller structure;

a second guide structure longitudinally extending between the pick roller structure and the drive roller structure to define a media path between first and second guide structures,

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the media path defining a media entrance adjacent the pick roller structure and a media exit adjacent the drive roller structure; and

wherein the media path constrains the movement of a trailing edge of the media sheet as the trailing edge leaves the pick roller structure to minimize trailing edge print defects, wherein the first and second guide structures are separated by a distance, the distance being greater at the media exit than at the media entrance wherein the distance between the first and second guide structures increases gradually from the media entrance to the media exit.

29. (Previously Presented) The media handling system of claim 28, wherein the distance between the first and second guide structures is between 0.5 mm and 5 mm.

30. (Previously Presented) The media handling system of claim 28, wherein the pick roller structure includes a plurality of spaced pick roller wheels.

31. (Previously Presented) The media handling system of claim 30, further comprising:
a plurality of pinch wheels corresponding with the plurality of pick roller wheels, each of the plurality of pinch wheels corresponding with and positioned with respect to a corresponding pick roller wheel to create a nip between the respective pick roller wheel and the pinch wheel; and

wherein the second guide structure is arranged to constrain and support the media sheet at regions between the nips to reduce stress exerted on the media sheet at the nips.

32. (Previously Presented) The media handling system of claim 28, wherein the pick roller structure is configured to pick the media sheet from the input source in a first direction and to rotate the media sheet such that the media sheet exits the pick roller structure traveling in a second direction.

33. (Previously Presented) The media handling system of claim 32, wherein the first direction is opposite the second direction.

34. (Previously Presented) The media handling system of claim 32, further comprising:

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an input guide corresponding with the pick roller structure to guide the media sheet at least partially around the pick roller structure.

35. (Previously Presented) The media handling system of claim 28, wherein the first and second guide structures each linearly extend between the pick roller structure and the drive roller structure.

36. (Previously Presented) The media handling system of claim 28, wherein the first and second guide structures are positioned with respect to the pick roller structure such that the media sheet exits the pick roller directly into the media path.

37. (Cancelled)

38. (Previously Presented) The media handling system of claim 47, wherein the first guide structure defines a continuous surface extending entirely between the pick roller structure and the drive roller structure for supporting the media sheet.

39. (Previously Presented) The media handling system of claim 47, wherein the second guide structure defines a continuous surface extending between the pick roller structure and the drive roller structure.

40. (Previously Presented) The media handling system of claim 47, wherein the first and second guide surfaces each linearly extend between the pick roller structure and the drive roller structure.

41. (Previously Presented) The media handling system of claim 47, wherein the pick roller structure is configured to pick the media sheet from the input source in a first direction and to rotate the media sheet such that the media sheet exits the pick roller structure traveling in a second direction.

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42. (Previously Presented) The media handling system of claim 41, wherein the first direction is opposite the second direction.
43. (Previously Presented) The media handling system of claim 47, further comprising: an input guide corresponding with the pick roller structure to guide the media sheet at least partially around the pick roller structure.
44. (Previously Presented) The media handling system of claim 47, wherein the second guide structure extends at least partially over the drive roller structure.
45. (Previously Presented) The media handling system of claim 47, wherein the pick roller structure defines an outer roller surface that interacts with the media sheet, the first guide structure defines a first guide surface that interacts with the media sheet, and the first guide surface is contiguously positioned with respect to the outer roller surface.
46. (Previously Presented) The media handling system of claim 47, wherein the first guide structure is positioned with respect to the pick roller structure to continuously support the media sheet as the media sheet exits the pick roller structure and enters the media path.
47. (Previously Presented) A media handling system for handling sheets of media, the media handling system comprising:
- a pick roller structure configured to selectively contact and pick a media sheet from an input source;
 - a drive roller structure spaced from the pick roller structure;
 - a first guide structure longitudinally extending between the pick roller structure and the drive roller structure;
 - a second guide structure longitudinally extending between the pick roller structure and the drive roller structure spaced from the first guide structure to define a media path between first and second guide structures; and
 - wherein the media sheet exits the pick roller in the media path, the distance between the first and second guide structures constraining the movement of a trailing edge of the media sheet

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as the trailing edge leaves the pick roller structure to minimize trailing edge print defects, wherein the media path forms a media entrance abutting the pick roller structure and a media exit adjacent the drive roller structure, wherein the first guide structure is spaced from the second guide structure a greater distance at the media exit than at the media entrance.

48. (Previously Presented) The media handling system of claim 47, wherein the first guide structure is spaced from the second guide structure a distance between 0.5 mm and 2.9 mm at the media entrance.

49. (Previously Presented) The media handling system of claim 47, wherein the distance between the first guide structure and the second guide structure gradually increases between the media entrance and the media exit.

50. (Previously Presented) The media handling system of claim 47, wherein the first guide structure is spaced from the second guide structure a distance between 2.5 mm and 5 mm at the media exit.